



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPEAL BRIEF FOR THE APPELLANT

Ex parte Stefano FACCIN et al.

**SYSTEM AND METHOD FOR CONTROLLING APPLICATION LEVEL  
ACCESS FOR SUBSCRIBER TO A NETWORK**

Serial No. 09/731,758

Group Art Unit: 2152

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Arlene P. Neal  
Attorney for Appellant(s)  
Reg. No. 43,828

SQUIRE, SANDERS & DEMPSEY LLP  
8000 Towers Crescent Drive, 14<sup>th</sup> Floor  
Tysons Corner, VA 22182-2700

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Appellant:

Stefano FACCIN et al.

Serial Number: 09/731,758

Group Art Unit: 2152

Filed: December 8, 2000

Examiner: D. CHANKONG

For: SYSTEM AND METHOD OF CONTROLLING APPLICATION LEVEL ACCESS  
FOR SUBSCRIBER TO A NETWORK

BRIEF ON APPEAL

August 8, 2007

I. INTRODUCTION

This is an appeal from the final rejection set forth in an Official Action dated January 3, 2007, finally rejecting claims 1-85, all of the claims pending in this application. A Request for Reconsideration was timely filed on March 5, 2007. An Advisory Action was issued on March 19, 2007, indicating that the Request for Reconsideration had been considered but did not place the application in condition for allowance because the arguments presented were not persuasive. A Pre-Appeal Brief Request for Review and Notice of Appeal were timely filed on April 3, 2007. A Notice of Panel Decision from Pre-Appeal Brief Review was issued on June 8, 2007, indicating that there is at least one actual issue for appeal. This Appeal Brief is being timely filed.

## II. REAL PARTY IN INTEREST

The real party in interest in this application is Nokia Corporation. The application has been assigned to Nokia Networks Oy, by virtue of an assignment by the inventor. The assignment was recorded at Reel 011749, Frame 0408, on May 3, 2001. Nokia Network Oy has been merged in its entirety into Nokia Corporation.

## III. STATEMENT OF RELATED APPEALS AND INTERFERENCES

There are no known related appeals and/or interferences which will directly effect or be directly effected by or have a bearing on the Board's decision in this appeal.

## IV. STATUS OF CLAIMS

Claims 1-85, all of the claims pending in the present application, are the subject of this appeal. Specifically, the following rejections are the subject of this appeal.

- Claims 1, 34, 37, 68, 78 and 85 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2001/0031635 to Baharatia (hereinafter Baharatia).
- Claims 1-31 and 34-85 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,742,668 Pepe (hereinafter Pepe) in view of U.S. Patent No. 6,611,685 to Rune (hereinafter Rune).
- Claims 32 and 33 under 35 U.S.C. 103(a) were rejected as being unpatentable over Pepe in view of U.S. Patent No. 6,148,199 to Hoffman (hereinafter Hoffman).

- Claims 1, 34, 37, 68 and 78 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,745,029 Lahtinen (hereinafter Lahtinen) in view of U.S. Patent No. 6,769,000 to Akhtar.
- Claims 1, 34, 37, 68 and 78 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of U.S. Patent No. 6,947,432 to Roy (hereinafter Roy).

## V. STATUS OF AMENDMENTS

Claims 1, 17-31, 34, 37, 68 and 78 were amended in a Response which was filed on November 18, 2005. Claims 1, 34, 37, 68 and 78 were further amended in a Response which was filed on April 14, 2006. Claim 85 was added and claims 1-84 were amended in a Response which was filed on October 12, 2006. No further amendments have been made, therefore, claims 1-85 are pending.

## VI. SUMMARY OF THE CLAIMED SUBJECT MATTER

In one embodiment, the invention relates to a method which includes sending, from a visited network 12/102 of a plurality of networks 12-16/102 and 106-110 to a home network 10/104, an identification of a subscriber and an access to be provided to the subscriber. (Specification, Page 2, lines 12-17 and Figures 1 and 6) The method also includes in response to the identification of the subscriber 18 and access to be provided to the subscriber, storing, in the visited network 102, a subscriber profile of an authorized

access of a plurality of authorized accesses to be provided to the subscriber and controlling access of the subscriber to a network dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses. (Specification, Page 5, lines 16-20 and Page 18, line 23-Page 19, line 3) An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network and the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. (Specification, Page 6, lines 7-13 and page 16, line 22-page 17, line 3).

In another embodiment as illustrated in Figures 1 and 6, the invention relates to a system including a home network 10/104 which stores a plurality of subscriber profiles each defining an access to be provided to a subscriber of a network and a plurality of networks 12-16/106-110 connected to the home network. (Specification, Page 10, lines 19-23 and Figures 1 and 6) The system includes a plurality of networks 12-16/106-110 connected to the home network 10/104. (Specification, Page 10, lines 19-23 and Figure 1)

The system also includes a subscriber equipment 18/112 connected to a visited one of the plurality of networks 12-16/106-110 through which the subscriber obtains an access to any network. (Specification, Page 11, lines 11-14 and Page 16, lines 15-21) In response to connection of the subscriber equipment to the visited network, an identification of the subscriber and an access to be provided to the subscriber is sent from the visited network to

the home network (Page 17, lines 3-6), and a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber is stored in one of the plurality of networks and access of the subscriber to the network is controlled by one of the plurality of networks storing the subscriber profile dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses. (Specification, Page 11, line 14-Page 12, line 11 and Page 17, lines 11-21) An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. (Specification, Figure 6 and page 16, line 22-page 17, line 3).

In another embodiment as disclosed on page 11, line 1-page 12, line 1 of the specification, the invention relates to a method including during or after the subscriber registers in a network, providing an identification of the subscriber and an access of a plurality of accesses, to a visited network of a plurality of networks from a home network of the subscriber, the access comprising an identification of access from the plurality of accesses to one of the plurality networks in which the subscriber is registered.

(Specification, Page 17, line 22-Page 18, line 2) An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network and the visited network receiving the request

transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. (Specification, Figure 6 and page 16, line 22-page 17, line 3).

Another embodiment of the invention provides a method including providing an identification of the subscriber, to a visited network 102 of at least one of a plurality of networks from a home network 104. (Specification, Page 17, lines 11-21) In response to the providing of the identification of the subscriber, storing a subscriber profile of an access of a plurality of accesses to be provided to the subscriber in the visited network and using the stored subscriber profile in controlling service provided to the subscriber.

(Specification, Page 18, line 23-Page 19, line 3) An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network. (Specification, Page 16, lines 15-18) The visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. (Specification, Page 16, line 22-Page 17, line 3).

Another embodiment of the invention, as shown in Figure 6, is directed to a system including networks 106-110 in which a subscriber may register and a home network 104 in which a plurality of subscriber profiles are stored, each of the profiles defining an access to be provided to the subscriber while registered in the networks. A subscriber equipment 112 is connected to the networks while the subscriber is registered therein; In response to

connection of the subscriber equipment 113 to one of the networks 106-110 at least an identification of the subscriber is provided from a visited network 102 of the networks to the home network 104. (Specification, Page 17, lines 3-6) A subscriber profile of an access of a plurality of accesses to be provided to the subscriber by at least one of the networks is stored, and the stored subscriber profile is used in controlling service provided to the subscriber. (Specification, Page 17, lines 6-11) An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network. (Specification, Page 16, lines 15-18) The visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. (Specification, Page 16, line 22-Page 17, line 3).

Another embodiment of the invention is directed to an apparatus including sending means 118 for sending, from a visited network 102 of a plurality of networks 106-110 to a home network 103, an identification of a subscriber and an access to be provided to the subscriber. (Specification, Page 17, lines 3-6) In response to the identification of the subscriber and access to be provided to the subscriber, storing means 118 for storing, in the visited network, a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber. Controlling means 118 for controlling access of the subscriber to a network dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of



authorized accesses. (Specification, Page 18, line 23-Page 19, line 3) Generating means 112 for generating an application level registration message including the identification of the subscriber in response to a request from a subscriber equipment to the visited network and transmitting means 118 for transmitting, in the visited network receiving the request, an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. (Specification, Page 16, line 15-Page 17, line 3)

## VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1, 34, 37, 68, 78 and 85 are anticipated under 35 U.S.C. 102(e) by Baharatia. Whether claims 1-31 and 34-85 are unpatentable under 35 U.S.C. 103(a) over Pepe in view of Rune. Whether claims 32 and 33 are unpatentable under 35 U.S.C. 103(a) over Pepe in view of Hoffman. Whether claims 1, 34, 37, 68 and 78 are unpatentable under 35 U.S.C. 103(a) over Lahtinen in view of Akhtar. Whether claims 1, 34, 37, 68 and 78 are unpatentable under 35 U.S.C. 103(a) over Hoffman in view of Roy. As will be discussed below, this Appeal Brief will show that these rejections should be withdrawn, and this application passed to issue.

## VIII. GROUPING OF CLAIMS

Applicants respectfully submit that each of claims 1-85 stands alone. In other words, each of the presently pending claims is separately patentable.

## IX. APPELLANT'S ARGUMENTS

### REJECTION UNDER 35 U.S.C. 102(E) OF CLAIMS 1, 34, 37, 68, 78 AND 85 BY

#### BAHARATIA

The Office Action alleged that claims 1, 34, 37, 68, 78 and 85 are anticipated 35 U.S.C. 102(e) by Baharatia. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1, 34, 37, 68, 78 and 85.

Claim 1, upon which claims 2-33 depend, recites a method including sending, from a visited network of a plurality of networks to a home network, an identification of a subscriber and an access to be provided to the subscriber. The method also includes in response to the identification of the subscriber and access to be provided to the subscriber, storing, in the visited network, a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber and controlling access of the subscriber to a network dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses. An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network and the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber

and a particular network at which the subscriber is located.

Claim 34, upon which claims 35-36 depend, recites a system including a home network which stores a plurality of subscriber profiles each defining an access to be provided to a subscriber of a network and a plurality of networks connected to the home network. The system also includes a subscriber equipment connected to a visited one of the plurality of networks through which the subscriber obtains an access to any network. In response to connection of the subscriber equipment to the visited network, an identification of the subscriber and an access to be provided to the subscriber is sent from the visited network to the home network, and a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber is stored in one of the plurality of networks and access of the subscriber to the network is controlled by one of the plurality of networks storing the subscriber profile dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses. An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

Claim 37, upon which claims 38-67 depend, recites a method including during or after the subscriber registers in a network, providing an identification of the subscriber and

an access of a plurality of accesses, to a visited network of a plurality of networks from a home network of the subscriber. The access comprises an identification of access from the plurality of accesses to one of the plurality networks in which the subscriber is registered. An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network. The visited network receives the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

Claim 68, upon which claims 69-77 depend, recites a method including providing an identification of the subscriber, to a visited network of at least one of a plurality of networks from a home network. The method also includes, in response to the providing of the identification of the subscriber, storing a subscriber profile of an access of a plurality of accesses to be provided to the subscriber in the visited network and using the stored subscriber profile in controlling service provided to the subscriber. An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network. The visited network receives the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

Claim 78, upon which claims 79-84 depend, recites a system including networks in

which a subscriber may register and a home network in which a plurality of subscriber profiles are stored. Each of the profiles defines an access to be provided to the subscriber while registered in the networks. The system includes a subscriber equipment which is connected to the networks while the subscriber is registered therein. In response to connection of the subscriber equipment to one of the networks at least an identification of the subscriber is provided from a visited network of the networks to the home network. A subscriber profile of an access of a plurality of accesses to be provided to the subscriber by at least one of the networks is stored, and the stored subscriber profile is used in controlling service provided to the subscriber. An application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network and the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

Claim 85 recites an apparatus including sending means for sending, from a visited network of a plurality of networks to a home network, an identification of a subscriber and an access to be provided to the subscriber. The apparatus also includes storing means for storing, in the visited network, a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber, in response to the identification of the subscriber and access to be provided to the subscriber. The apparatus further includes controlling means for controlling access of the subscriber to a network dependent upon a

comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses. The apparatus also includes generating means for generating an application level registration message including the identification of the subscriber in response to a request from a subscriber equipment to the visited network and transmitting means for transmitting, in the visited network receiving the request, an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

As will be discussed below, Baharatia fails to disclose or suggest the elements of the presently pending claims.

Baharatia discloses that a Home Subscriber Service (HSS) is responsible for storing and managing (1) subscriber identification, numbering and addressing information; (2) user security information, for example, network access control information for authentication and authorization; (3) user location information at inter-system level and (4) the subscriber profile, for example, services supported, service specific information, etc. Based upon this subscriber information, the HSS is also responsible for supporting the call control and short message entities of the different control systems offered by the system operator. A mobile terminal initiates registration by sending a registration request message to a serving CSCF, the request includes the identity of a corresponding subscriber. The serving CSCF requests the subscriber's profile from the HSS by sending a registration notification message to the

HSS. In response to the receipt of the registration notification message, the HSS sends a registration cancellation message to the old CSCF. The old CSCF then erases the current information it stores for the subscriber and acknowledges the request by sending a registration cancellation confirmation message to the HSS. The HSS then provides the subscriber information to the serving SGSN via a registration notification acknowledgement message. Finally, the registration is confirmed to the mobile terminal by the serving CSCF in a registration confirmation message. See Figure 3 and paragraphs 0111-0116 of Baharatia.

Applicants submit that Baharatia does not teach or suggest each of the features recited in claims 1, 34, 37, 68, 78 and 85. The Office Action alleged that paragraphs 0077 and 0111-0116 of Baharatia teach wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located, as recited in claims 1, 34, 37, 68, 78 and 85. The cited sections of Baharatia discloses that a mobile terminal initiates registration by sending a registration request message to a serving CSCF, the request includes the identity of a corresponding subscriber. Therefore, in Baharatia, the registration request message is not generated **in response to** a request from the subscriber equipment to the visited network, as recited in

claims 1, 34, 37, 68, 78 and 85. Rather, in Baharatia, the registration request message is the request from the subscriber equipment to the visited network.

There is also no teaching or suggestion in Baharatia that the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located, as recited in claims 1, 34, 37, 68, 78 and 85. In Baharatia, the visited network merely requests the subscriber's profile from the HSS. There is no teaching or suggestion in Baharatia of the visited network informing the home network of a particular network in which the subscriber is located, as alleged in the Office Action. Due to the significant deficiencies in Baharatia which are discussed above, it is respectfully submitted that Baharatia cannot be interpreted as anticipating any of the presently pending claims. Furthermore, Applicants respectfully submit that it is well established in United States patent law that it is improper to ignore specific limitations of a claimed invention which distinguish over a cited reference or references. See, for example, *In re Glass*, 176 USPQ 49 (CCPA 1973), *In re Chandler*, 117 USPQ 361 (CCPA 1958). Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §102(e) should be withdrawn because Baharatia fails to teach or suggest each feature of claims 1, 34, 37, 68, 78 and 85.



REJECTION UNDER 35 U.S.C. 103(a) OF CLAIMS 1-31 and 34-85 OVER PEPE IN VIEW  
OF RUNE

Claims 1-31 and 34-85 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pepe in view of Rune. According to the Office Action, Pepe teaches all of the elements of claims 1 and 85 except for disclosing an update location message. Therefore, the Office Action combined the teachings of Pepe and Rune in an effort to yield all of the elements of claims 1-31 and 34-85. The rejection is traversed as being based on references that neither teach nor suggest the novel and non-obvious combination of features clearly recited claims 1-31 and 34-85.

Each of the claims 1, 34, 37, 68, 78 and 85 has been discussed above. Claims 2-33 depend on claim 1, and recites additional limitations thereupon. Thus, each of claims 2-33 is patentable for at least the reasons claim 1 is patentable, and further, because it recites additional limitations. Claims 35-36 depend on claim 34, and recites additional limitations thereupon. Thus, each of claims 35-36 is patentable for at least the reasons claim 34 is patentable, and further, because it recites additional limitations. Claims 38-97 depend on claim 37, and recites additional limitations thereupon. Thus, each of claims 38-67 is patentable for at least the reasons claim 67 is patentable, and further, because it recites additional limitations. Claims 69-77 depend on claim 68, and recites additional limitations thereupon. Thus, each of claims 69-77 is patentable for at least the reasons claim 68 is patentable, and further, because it recites additional limitations. Claims 79-84 depend on

claim 78, and recites additional limitations thereupon. Thus, each of claims 79-84 is patentable for at least the reasons claim 78 is patentable, and further, because it recites additional limitations. Accordingly, the Board's consideration and reversal of the rejection of claims 1-31 and 34-85 over Pepe in view of Rune is respectfully requested.

Pepe relates to an electronic messaging network. Pepe describes a personal communications interworking (PCI) 40 connected between wireless network 39 and wireline network 29. PCI 40 permits the mobile communications subscriber to send and receive messages between disparate networks, messaging systems and a variety of service providers. Figure 3 of Pepe shows PCI 40 and a PCI database 44 that stores and updates subscriber profiles. Pepe describes that the PCI provides the subscriber with control over the message routing and delivery by the subscriber accessible "subscriber profile" stored in the PCI. The subscriber profile contains subscriber programmed instructions on message receipt, origination and notification. PCI 40 operates as a messaging gateway for providing access to multiple wireline and wireless networks, while using subscriber profile information to control sending and receiving options. PCI 40 allows wireless service providers to integrate the voice messaging, e-mail, and fax message services for one subscriber through a single telephone number. Thus, Pepe describes one phone number that provides a single link between the service provider and the subscriber's voice and data communications lines.

Pepe also discloses that there are two types of registration and deregistration:

explicit and implicit. For explicit registration, once the subscriber is successfully registered, if the subscriber's profile is not already present in the PCI server, the PCI server will request a download from the PCI database. See at least page 15, line 66-page 16, line 35 and Figure 12 of Pepe.

Rune discloses that a gateway location register receives a reset message from a home location register when the home location register is recovering from a fault. The gateway location register determines which mobile subscribers are associated with the home location register. The gateway location register sends a reset message, with the gateway location register number instead of the home location register number, to a visited location register where at least one of the mobile subscribers associated with the home location register is located. The reset message causes the visited location registers to begin a location updating procedure. The gateway location register receives an update location message from a visited location register that received the reset message. If a "location information confirm in HLR" flag is set to not confirmed, the gateway location register will respond to the update location messages after sending subscription information for the mobile subscriber; otherwise, the gateway location register sends an update location message to the home location register. See at least Col. 5, line 56-Col. 6, line 54 and Figures 6A and 6B.

Applicants submit that the combination of Pepe and Rune fails to teach or suggest the combination of features recited in claims 1-31 and 34-85. The Office Action alleged

that Col. 15, lines 66-Col. 16, line 35 of Pepe discloses wherein an application level registration message including the identification of the subscriber and is generated in response to a request from a subscriber equipment to the visited network and wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located, as recited in the pending claims. As noted above, the cited sections of Pepe does not teach these features.

Rune does not cure any of the deficiencies of Pepe. Unlike what is alleged in the Office Action, Rune does not teach or suggest that the visited network transmits an update location message to the home network for informing the home network of the identification of the subscriber. Rather, in Rune the subscription information is sent from the gateway location register to the visited location register if a “location information confirm in HLR” flag is set to not confirm when the gateway location register receives the update location message from the visited location register.

It is respectfully submitted that Rune cannot be interpreted as curing any of the significant deficiencies in Pepe which are discussed above, Furthermore, as noted above, Applicants respectfully submits that it is well established in United States patent law that it is improper to ignore specific limitations of a claimed invention which distinguish over a cited reference or references. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Pepe nor Rune, whether

taken singly or combined teaches or suggest each feature of claims 1, 34, 37, 68, 78 and 85, and hence dependent claims 2-32, 35-36, 38-67, 69-77 and 79-84 thereon, at least for their dependence on the independent claims in addition to the additional limitations recited in each of claims 2-32, 35-36, 38-67, 69-77 and 79-84.

REJECTION UNDER 35 U.S.C. 103(a) OF CLAIMS 32 and 33 OVER PEPE IN VIEW OF

HOFFMAN

Claims 32 and 33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pepe in view of Hoffman. According to the Office Action, Pepe teaches all of the elements of claims 32 and 33 except for the application level registration message. Therefore, the Office Action combined Pepe and Hoffman in an effort to yield all of the elements of claims 32 and 33. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, upon which claims 32 and 33 depend.

Hoffman discloses that a typical communications network includes a home location register (HLR) that includes user information, user profiles, feature activation status, and access privileges. When a network equipment receives a request for registration from a communication unit, the network equipment accesses the HLR, finds a corresponding subscriber record and determines what features to activate for the communication unit. The information is transferred to a visitor location register (VLR) which tracks the

communication unit's location in the system.

Claim 32 and 33 depend on claim 1. Hoffman does not cure the deficiency of Pepe, as outlined above. Specifically, neither Hoffman nor Pepe teaches or suggests wherein an application level registration message including the identification of the subscriber and is generated in response to a request from a subscriber equipment to the visited network and wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located, as recited in claim 1, upon which claims 32 and 33 depend. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Pepe nor Hoffman, whether taken singly or combined teaches or suggest each feature of claim 1, and hence dependent claim 32 and 33 thereon.

REJECTION UNDER 35 U.S.C. 103(a) OF CLAIMS 1, 34, 37, 68 and 78 OVER LAHTINEN

IN VIEW OF AKHTAR

Claims 1, 34, 37, 68 and 78 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lahtinen in view of Akhtar. According to the Office Action, Lahtinen teaches all of the elements of the claims except teaching an application level registration message or an update location message. Therefore, the Office Action combined Lahtinen and Akhtar in an effort to yield all of the elements of claims 1, 34, 37, 68 and 78. The

rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, 34, 37, 68 and 78, each of which is discussed above.

Lahtinen discloses that a subscriber moving from one network to another will have available all the supplementary network services that the subscriber's user terminal supports. Supplementary services are always associated with a certain amount of data which has to be stored in a permanent subscriber database and transferred to a system visited at a particular time. A method implemented in Lahtinen includes initiating by at least one user terminal the registration in the visited network which includes at least one network-specific supplementary service. The method also includes transferring the data relating to the common services of the home network and the visited network, in connection with the registration, from the subscriber database of the home network for temporary storage to the subscriber database of the visited network. Col. 2, lines 39-46 and Col. 3, lines 17-26.

Akhtar discloses a communications architecture for enabling IP-based mobile communications. Each of claims 1, 34, 37, 68 and 78 recite wherein an application level registration message including the identification of the subscriber and is generated in response to a request from a subscriber equipment to the visited network and wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a

particular network at which the subscriber is located. Neither Lahtinen nor Akhtar teaches or suggests these features. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Lahtinen nor Akhtar, whether taken singly or combined, teaches or suggests each feature of claims 1, 34, 37, 68 and 78.

REJECTION UNDER 35 U.S.C. 103(a) OF CLAIMS 1, 34, 37, 68 and 78 OVER HOFFMAN

IN VIEW OF ROY

Claims 1, 34, 37, 68 and 78 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of Roy. According to the Office Action, Hoffman teaches all of the elements of claims 1, 34, 37, 68 and 78 except for the application level registration message or the update location message. Therefore, the Office Action combined Roy and Hoffman in an effort to yield all of the elements of claims 1, 34, 37, 68 and 78. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, 34, 37, 68 and 78, each of which is discussed above.

Hoffman has been discussed above. Roy discloses that a mobile entity's location information is updated with a home location function using a request message because the mobile entity is now in a visited network in its home zone. The home location function stores that the mobile entity is associated with a different network and, in the event of an inter-zone move, the identity of the visiting zone and network. The home location function



sends a location update confirmation to a home gatekeeper which sends back a registration message to the mobile entity. See at least Col. 8, line 43-Col. 9, line 10.

Each of claims 1, 34, 37, 68 and 78 recites wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network and wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located. Hoffman does not recite these features.

Roy does not cure any of the deficiencies of Hoffman. Specifically, Roy does not seem to teach or suggest wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network and wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located, as recited in claims 1, 34, 37, 68 and 78. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Hoffman nor Roy, whether taken singly or combined, teaches or suggests each feature of claims 1, 34, 37, 68 and 78.

## X. CONCLUSION

For all of the above noted reasons, it is strongly submitted that certain clear differences exist between the present invention as claimed in claims 1-85 and the prior art relied upon by the Examiner. It is further submitted that these differences are more than sufficient that the present invention would not have been obvious to a person having ordinary skill in the art at the time the invention was made. This final rejection being in error, therefore, it is respectfully requested that this Honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case regarding the rejection of claims 1-85, and indicate the allowability of all of pending claims 1-85.

In the event that this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees which may be due with respect to this paper may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

SQUIRE, SANDERS & DEMPSEY LLP



Arlene P. Neal  
Attorney for Applicant(s)  
Registration No. 43,828

Atty. Docket No.: 059864.00529

8000 Towers Crescent Drive, 14<sup>th</sup> Floor  
Tysons Corner, VA 22182-2700  
Tel: (703) 720-7800  
Fax (703) 720-7802

APN:ksh

Encls: Appendix 1 – CLAIMS APPENDIX  
Appendix 2 – EVIDENCE APPENDIX  
Appendix 3 – RELATED PROCEEDINGS APPENDIX

## APPENDIX 1

### CLAIMS APPENDIX

1. (Currently Amended) A method, comprising:

sending, from a visited network of a plurality of networks to a home network, an identification of a subscriber and an access to be provided to the subscriber;

in response to the identification of the subscriber and access to be provided to the subscriber, storing, in the visited network, a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber; and

controlling access of the subscriber to a network dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses,

wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and

wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

2. The method in accordance with claim 1 wherein, the storing of the subscriber profile is in the home network.

3. The method in accordance with claim 1 wherein, the storing of the subscriber profile is in the visited network.

4. The method in accordance with claim 1 wherein, each different access provides a different degree of bandwidth in communications.

5. The method in accordance with claim 1 wherein, each access provides for a different degree of security in communications.

6. The method in accordance with claim 1 wherein, each access provides different connection supplementary services.

7. The method in accordance with claim 2 wherein, each access provides a different degree of bandwidth in communications.

8. The method in accordance with claim 2 wherein, each access provides for a different degree of security in communications.

9. The method in accordance with claim 2 wherein, each access provides

different connection supplementary services.

10. The method in accordance with claim 3 wherein, each access provides a different degree of bandwidth in communications.

11. The method in accordance with claim 3 wherein, each access provides for a different degree of security in communications.

12. The method in accordance with claim 3 wherein, each access provides different connection supplementary services.

13. The method in accordance with claim 1 wherein, the home network is an internet protocol network and the visited network is a wireless public cellular bearer network.

14. The method in accordance with claim 13 wherein, the public cellular bearer network is a general packet radio system network.

15. The method in accordance with claim 1 wherein, the home network is an internet protocol network and the visited network is an internet service provider.

16. The method in accordance with claim 1 wherein, the home network is an internet protocol network and the one visited network is a wireless local area network.

17. The method in accordance with claim 1 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

18. The method in accordance with claim 2 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

19. The method in accordance with claim 3 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

20. The method in accordance with claim 4 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

21. The method in accordance with claim 5 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

22. The method in accordance with claim 6 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

23. The method in accordance with claim 7 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

24. The method in accordance with claim 8 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

25. The method in accordance with claim 9 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

26. The method in accordance with claim 10 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

27. The method in accordance with claim 11 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

28. The method in accordance with claim 12 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.



29. The method in accordance with claim 13 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

30. The method in accordance with claim 15 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

31. The method in accordance with claim 16 wherein, the access is chosen from the plurality of authorized accesses which may be granted to the subscriber.

32. The method in accordance with claim 1 wherein,  
an application level registration message containing the identification of the subscriber and the access is generated in response to a request from subscriber equipment to a visited network entity;

in response to an entity in the visited network receiving the request, an address of an entity in the home network is obtained from a routing analysis in the visited network; and

the application level registration message is transmitted to the address in the home network.

33. The method in accordance with claim 32 wherein, an entity of the home

network obtains the subscriber profile in response to receipt of the application level registration message.

34. (Currently Amended) A system comprising:

a home network which stores a plurality of subscriber profiles each defining an access to be provided to a subscriber of a network;

a plurality of networks connected to the home network;

a subscriber equipment connected to a visited one of the plurality of networks through which the subscriber obtains an access to any network; and

wherein in response to connection of the subscriber equipment to the visited network, an identification of the subscriber and an access to be provided to the subscriber is sent from the visited network to the home network, and

a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber is stored in one of the plurality of networks and access of the subscriber to the network is controlled by one of the plurality of networks storing the subscriber profile dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses,

wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited

network, and

wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

35. The system in accordance with claim 34 further comprising, a network entity within the home network which stores the subscriber profile.

36. The system in accordance with claim 34 further comprising:  
a network entity within the visited network which stores the subscriber profile.

37. (Currently Amended) A method, comprising:  
during or after the subscriber registers in a network, providing an identification of the subscriber and an access of a plurality of accesses, to a visited network of a plurality of networks from a home network of the subscriber, the access comprising an identification of access from the plurality of accesses to one of the plurality networks in which the subscriber is registered,

wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and

wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

38. The method in accordance with claim 37 wherein, in response to the providing of the identification of the subscriber and the access at the home network, storing a subscriber profile indicating an access to be provided to the subscriber to at least the networks; and using the stored subscriber profile in controlling service provided to the subscriber.

39. The method in accordance with claim 38 wherein, the controlling of the service provided to the subscriber occurs while the subscriber is registered in a visited network and the networks are access networks from which the subscriber may obtain services while roaming in the visited network.

40. The method in accordance with claim 39 wherein, the controlling of the service provided to the subscriber occurs from a request of a call controlling entity.

41. The method in accordance with claim 37 comprising:  
storing the subscriber profile in the home network.

42. The method in accordance with claim 39 comprising:

storing the subscriber profile in the home network.

43. The method in accordance with claim 39 comprising:

storing the subscriber profile in the visited network.

44. The method in accordance with claim 37 wherein, the sending of the identification of the subscriber and an access occurs in response to the transmission of an access type indicator identifying a network in which the subscriber is registered through the visited network to the home network or in response to a request from a call serving entity.

45. The method in accordance with claim 39 wherein, the sending of the identification of the subscriber and an access occurs in response to the transmission of an access type indicator identifying a network in which the subscriber is registered through the visited network to the home network or in response to a request from a call serving entity.

46. The method in accordance with claim 41 wherein, the sending of the identification of the subscriber and an access occurs in response to the transmission of an access type indicator identifying a network in which the subscriber is registered through the

visited network to the home network.

47. The method in accordance with claim 42 wherein, the sending of the identification of the subscriber and an access occurs in response to the transmission of an access type indicator identifying a network in which the subscriber is registered through the visited network to the home network.

48. The method in accordance with claim 43 wherein, the subscriber profile comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the networks.

49. The method in accordance with claim 44 wherein, the subscriber profile comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the access networks.

50. The method in accordance with claim 45 wherein, the subscriber profile comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the access networks.

51. The method in accordance with claim 46 wherein, the subscriber profile

comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the networks.

52. The method in accordance with claim 47 wherein, the subscriber profile comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the access networks.

53. The method in accordance with claim 46 wherein, the subscriber profile comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the access networks.

54. The method in accordance with claim 47 wherein, the subscriber profile comprises general service data used in providing service to the subscriber and data regarding permitted access of the subscriber to the access networks.

55. The method in accordance with claim 42 wherein, the application level of access originates from equipment of the subscriber registered to one of the networks.

56. The method in accordance with claim 43 wherein, the access originates from an entity providing an interface between the visited network and one of the access networks

to which the subscriber is registered.

57. The method in accordance with claim 44 wherein, the access is determined by a call control entity based upon information obtained by the control entity about the network to which the subscriber is registered.

58. The method in accordance with claim 39 wherein, in response to at least one subsequent identification of the subscriber and the access being provided at the home network, the home network sends to the visited network an acknowledgment of a change in registration of the subscriber to another access network.

59. The method in accordance with claim 37 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

60. The method in accordance with claim 39 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

61. The method in accordance with claim 41 wherein, the access is used by the



home network to control connectivity of communications to the subscriber through the home network.

62. The method in accordance with claim 44 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

63. The method in accordance with claim 48 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

64. The method in accordance with claim 55 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

65. The method in accordance with claim 56 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

66. The method in accordance with claim 57 wherein, the access is used by the

home network to control connectivity of communications to the subscriber through the home network.

67. The method in accordance with claim 58 wherein, the access is used by the home network to control connectivity of communications to the subscriber through the home network.

68. (Currently Amended) A method, comprising:

providing an identification of the subscriber, to a visited network of at least one of a plurality of networks from a home network;

in response to the providing of the identification of the subscriber, storing a subscriber profile of an access of a plurality of accesses to be provided to the subscriber in the visited network; and

using the stored subscriber profile in controlling service provided to the subscriber, wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and

wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

69. The method in accordance with claim 68 wherein, the controlling of the service provided to the subscriber occurs while the subscriber is registered in a visited network and the networks are access networks from which the subscriber may obtain services while registered in the visited network.

70. The method in accordance with claim 68 comprising:  
storing the subscriber profile in the home network.

71. The method in accordance with claim 69 comprising, storing the subscriber profile in the home network.

72. The method in accordance with claim 69 comprising, storing the subscriber profile in the visited network.

73. The method in accordance with claim 69 wherein, the providing of the identification of the subscriber occurs in response to transmission of an access type indicator to the home network identifying an access network.

74. The method in accordance with claim 70 wherein, the providing of the

identification of the subscriber occurs in response to transmission of an access type indicator to the home network identifying an access network.

75. The method in accordance with claim 71 wherein, the access originates from equipment of the subscriber registered to one of the networks.

76. The method in accordance with claim 72 wherein, the access originates from an interlace between the visited network and one of the access networks.

77. The method in accordance with claim 71 wherein, the access is determined by a call control entity based upon information obtained by the control entity about the network.

78. A system comprising:  
networks in which a subscriber may register;  
a home network in which a plurality of subscriber profiles are stored, each of the profiles defining an access to be provided to the subscriber while registered in the networks;  
a subscriber equipment which is connected to the networks while the subscriber is registered therein; and

wherein in response to connection of the subscriber equipment to one of the networks at least an identification of the subscriber is provided from a visited network of the networks to the home network,

wherein a subscriber profile of an access of a plurality of accesses to be provided to the subscriber by at least one of the networks is stored, and the stored subscriber profile is used in controlling service provided to the subscriber,

wherein an application level registration message including the identification of the subscriber is generated in response to a request from a subscriber equipment to the visited network, and

wherein the visited network receiving the request transmits an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

79. The system in accordance with claim 78 wherein, the controlling of the service provided to the subscriber occurs while the subscriber is registered in a visited network and the networks are access networks from which the subscriber may obtain services while registered in the visited network.

80. The system in accordance with claim 78 comprising, a storage in a visited network which stores the subscriber profile.

81. The system in accordance with claim 79 comprising, a storage in the visited network which stores the subscriber profile.

82. The system in accordance with claim 79 wherein, an access comprising an identification of access to one of the networks in which the subscriber is registered is transmitted from the visited network to the home network and the storing of the subscriber profile is in response to the identification of access at the homework.

83. The system in accordance with claim 79 wherein, the stored subscriber profile is used by the visited network in controlling service provided to the subscriber.

84. The method in accordance with claim 1 wherein, the access is an application level access.

85. An apparatus, comprising:  
sending means for sending, from a visited network of a plurality of networks to a home network, an identification of a subscriber and an access to be provided to the subscriber;

in response to the identification of the subscriber and access to be provided to the

subscriber, storing means for storing, in the visited network, a subscriber profile of an authorized access of a plurality of authorized accesses to be provided to the subscriber;

controlling means for controlling access of the subscriber to a network dependent upon a comparison of the access to be provided to the subscriber and the stored subscriber profile having the authorized access of the plurality of authorized accesses,

generating means for generating an application level registration message including the identification of the subscriber in response to a request from a subscriber equipment to the visited network; and

transmitting means for transmitting, in the visited network receiving the request, an update location message to the home network for informing the home network of the identification of the subscriber and a particular network at which the subscriber is located.

## EVIDENCE APPENDIX

NONE



RELATED PROCEEDINGS APPENDIX

NONE